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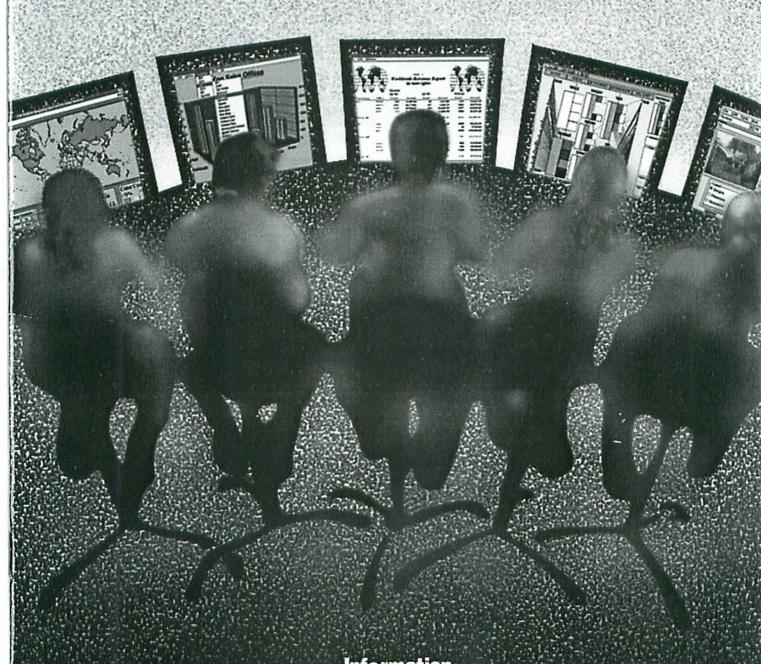
12/11/2009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Proceeding	91179897
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Date	12/11/2009
Attachments	PX25 of 87.pdf (12 pages)(1171072 bytes) PX26 of 87.pdf (4 pages)(450347 bytes) PX27 of 87.pdf (4 pages)(403864 bytes) PX28 of 87.pdf (1 page)(110554 bytes) PX29 of 87.pdf (1 page)(123190 bytes) PX30 of 87.pdf (1 page)(133085 bytes) PX31 of 87.pdf (1 page)(83001 bytes) PX32 of 87.pdf (4 pages)(388184 bytes) PX33 of 87.pdf (1 page)(106239 bytes) PX34 of 87.pdf (8 pages)(395301 bytes) PX35 of 87.pdf (2 pages)(330873 bytes) PX36 of 87.pdf (1 page)(96387 bytes) PX37 of 87.pdf (1 page)(158203 bytes) PX38 of 87.pdf (1 page)(363474 bytes) PX39 of 87.pdf (2 pages)(462568 bytes) PX40 of 87.pdf (21 pages)(659942 bytes)

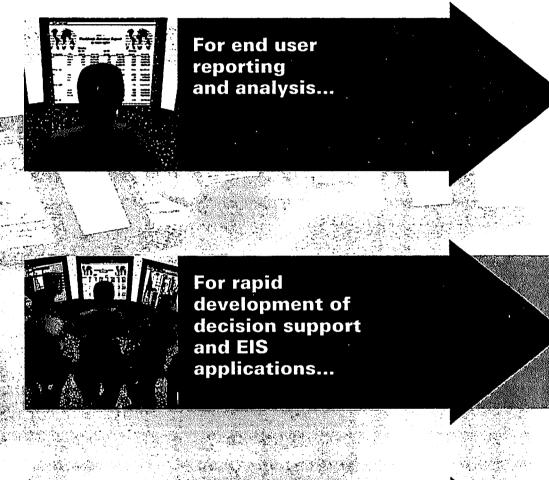


FOCUS Windows Products



Information Builders

In real-world competition, organizations choose FOCUS Windows products for enterprise-wide business intelligence.





FOCUS Reporter for Windows
 Client/Server Reporting

• Business Intelligence Suite Data: Analysis and Visualization

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Why FOCUS Outperforms Other Windows Tools

Thousands of the world's leading corporations depend on FOCUS for their mission-critical reporting applications running on every computer platform. Now, FOCUS delivers the best Windows-based solutions for enterprise-wide business intelligence.

Ease-of-Use Without Limits

Our ease-of-use never quits – providing fast solutions to any information need. Because underneath the GUI interface is the most efficient and versatile reporting language available today: FOCUS

FOCUS Windows products let users and developers analyze and present information that other tools can't — without complex programming. For example, using Report Assist and report and forms painters, users build comprehensive financial reports with ease, embed data and calculations in headings and footings, and even put detail and aggregate data in the same report.

Unmatched Enterprise-Wide Productivity

FOCUS Windows products meet the information requirements of competitive enterprises, including:

Cross-Platform Consistency -

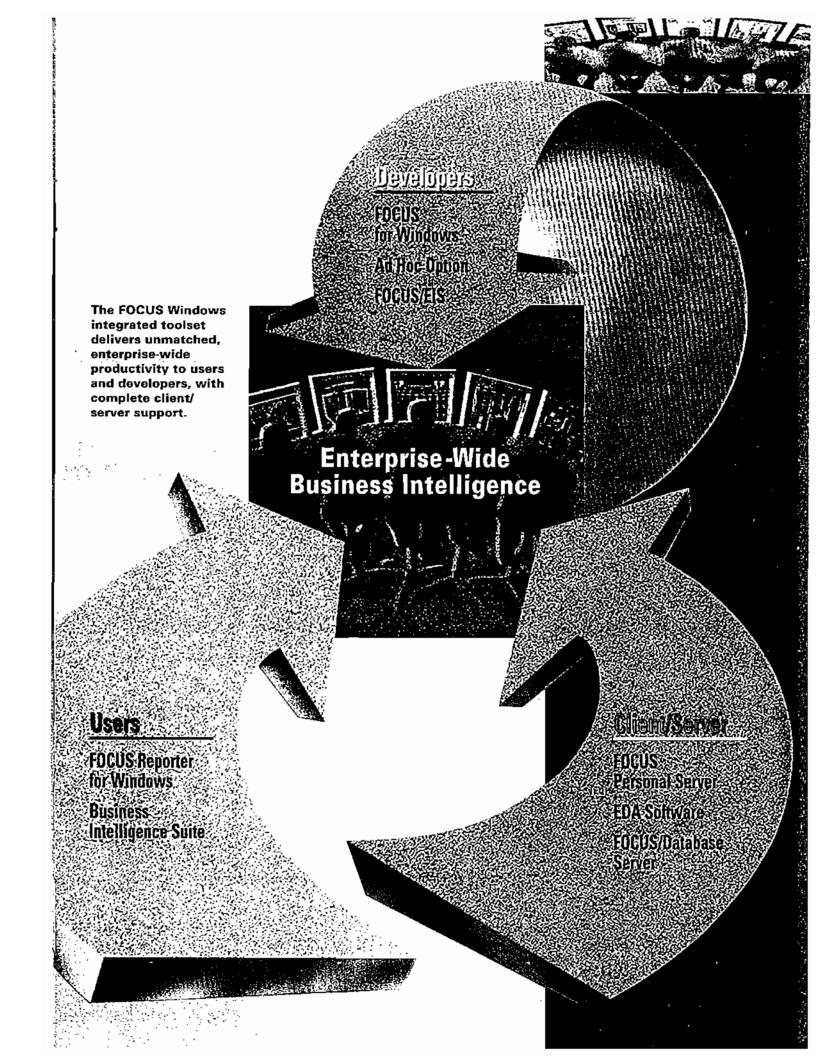
FOCUS allows business rules for calculations (such as return on investment), derived fields (such as defining "large" customers), and other descriptions so critical to providing consistent information among different workgroups and divisions. These business rules and data definitions can be stored and shared by all FOCUS users, even across platforms.

Dependable Accuracy – Today's GUI tools seem great until someone asks, "How did you calculate that amount?" The frequent answer, "I pointed here and clicked there" doesn't cut it. To ensure auditability, you can always see the underlying, straightforward English FOCUS syntax In fact, developers can go back and forth between the language and the GUI application for two-way editing.

Unrivaled Portability – FOCUS is the preferred tool for rightsizing because FOCUS applications can be ported without change to and from midrange and mainframe platforms – virtually all of today's major operating environments.

Superb Data Access – FOCUS products come with direct access to popular file formats and database servers, including dBASE, ODBC, Oracle, DB2/2, Sybase, SQL Server, Teradata, and Btrieve. And because FOCUS Windows products are EDA-enabled you can potentially access more than 55 relational and legacy databases on more than 30 platforms.

Client/Server in a Day – How about in a couple of hours? Information Builders unique Personal Server technology allows FOCUS Windows' clients to be seamlessly served by mainframe, UNIX, and Digital FOCUS servers, accessing just about any database, anywhere in the enterprise.



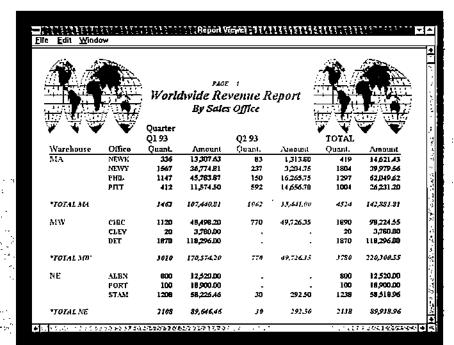


For End User Reporting

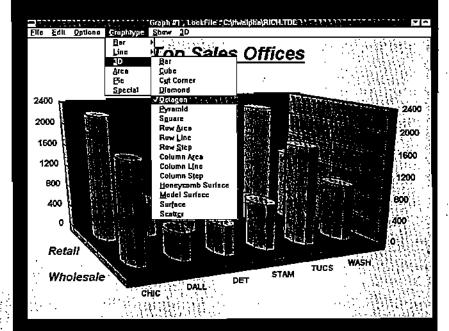
FOCUS Reporter for Windows

FOCUS Reporter for Windows is the most comprehensive, client/server reporting tool available. You can:

- Easily create complex, extended matrix reports for financial reporting with spreadsheet-like calculations in every line.
- Build and deploy complete reporting applications with the object-based Forms.
 Painter.
- Build solutions quickly with point-and-click Report Assist, Report Painter, Forms Painter, sensational 3-D graphics, and other easy-to-use Windows facilities.
- Add full Windows functionality to any existing FOCUS report, whether from DOS, midrange, or even mainframe platforms.
- Query, format, and style
 your report in one step a big
 time-saver.
- Use parameterization (variable substitution) for more reporting options without additional work.
- Access, join, and report directly from Oracle, Sybase, SQL Server, DB2/2, and other popular databases in the same report
- Impose field-level security to restrict access when necessary:



FOCUS Reporter for Windows gives users powerful Windows tools for creating even complex matrix reports quickly.

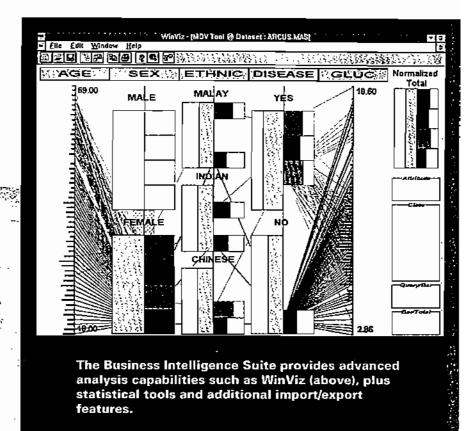


Presentation-quality graphics are just a few mouseclicks away.

Business Intelligence Suite (BIS)

The Business Intelligence Suite is a powerful, integrated add-on to the FOCUS Windows toolset, providing advanced tools for data analysis and visualization. With BIS, you can:

- Reveal trends and hidden data relationships not seen in reports and charts by using WinViz statistical analysis tools (see illustration). WinViz shows you information graphically that cannot be uncovered through standard means. Get answers to questions you didn't think of asking about your customers, prospects, employees, etc.
 - Take the complexity out of advanced statistical analysis with a point-and-click interface. BIS supports many functions such as standard deviation, mean, multiple linear regressions, polynomial regressions, time series analysis, and forecasting.



 Use Power Import/Export to exchange data between FOCUS Windows products and other PC programs, including Borland's Paradox and Quattro Pro, dBASE, Lotus 1-2-3 and Symphony, Microsoft Excel, SAS Transport, SPSS Export, Strata, and SYSTAT, plus mainframe and VAX FOCUS data files.

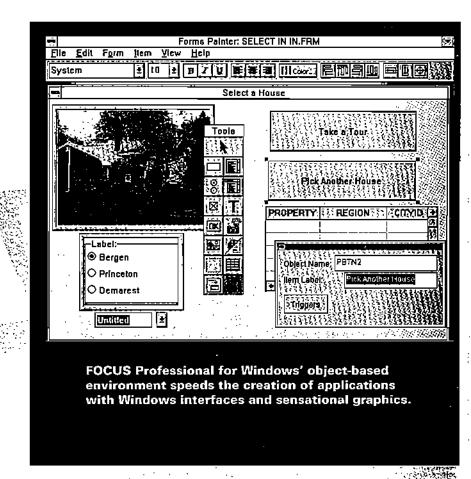


For Rapid Development of Decision Support and EIS Applications

FOCUS Professional for Windows*

FOCUS Professional for Windows is the best tool for building enterprise-wide decision support solutions with free unlimited distribution of runtime applications. You can:

- Build dazzling Windows applications rapidly with objects-based tools for developing forms, eventdriven triggers, rule-based parameters, calculations, reports, style sheets, and 3-D graphs – all with the ease of Microsoft Windows.
- Create standalone and client/server applications with bundled interfaces to popular file formats and databases, whether local or remote.
- Rightsize any FOCUS application with FOCUS' extensive cross-platform portability.
- Bundle-in unlimited runtimes to distribute applications without constraint to any Windows user anywhere in your organization.
- Rely on the unrivaled auditability and portability of FOCUS.



 Package, distribute, and manage applications quickly. An Application Packager makes installation scripts, compression, and deployment of applications simple and fast. With an Object Browser, you can easily manage application components by displaying them graphically.

FOCUS Ad Hoc Option

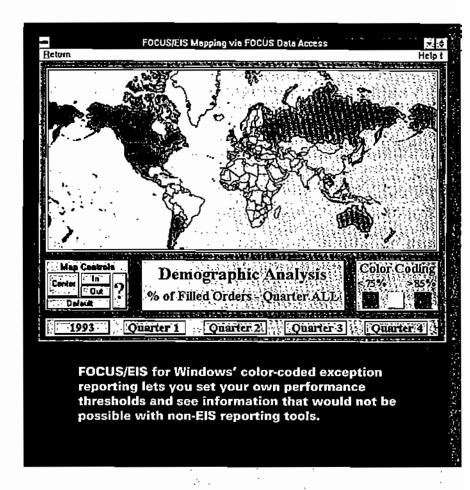
FOCUS Ad Hoc Option is a subset of FOCUS Reporter for Windows that allows runtime applications created by FOCUS Professional to generate ad hoc reports. Developers can reduce the application backlog by letting users get the additional information they need on their own.

FOCUS for Windows (Standard Edition) consists of all FOCUS Professional facilities except unlimited runtimes and application packaging and distribution software.

FOCUS/EIS for Windows

FOCUS/EIS for Windows is a powerful client/server tool for creating Executive Information System applications. Its graphical, data-driven displays provide decision makers with invaluable, real-time information. With FOCUS/EIS for Windows, you can:

- Build mission-critical EIS applications to offer instant access to enterprise information for operations, sales, marketing, accounting, corporate, and any other department.
- Identify critical trends in a matter of seconds with colorcoded exception reporting.
- Reach all the data you need quickly by "drilling down" on "hot spots" to increasingly detailed layers of information, summary charts, and graphs with a click of your mouse.
- Compare and contrast information instantly with combinations of text, charts, graphics, drawings, images, and maps — all on one screen.
- Access data on PCs, LANs, or remote data servers transparently. Use FOCUS or SQL as the access and analysis language.

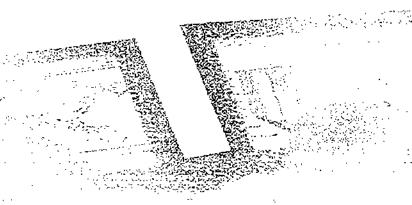


- Get the most up-to-date information – because screen objects are dynamically driven by live data. And since screens do not have to be redesigned, they are easier to maintain.
- Integrate FOCUS Windows products and third-party data analysis and decision support tools into your applications.



For Fast Client/Server Deployment: Integrate Data, Applications, and Hardware

Information Builders is the recognized leader in client/server implementation and data access technology. The inventor of EDA/SQL, the world's leading middleware, Information Builders has the expertise to help you get the most from your current portfolio of hardware and software.



FOCUS Personal Server

Personal Server is the ideal way for FOCUS Reporter for Windows users to access mainframe, UNIX, and Digital FOCUS servers as fast and as easily as they access local data. Personal Server lets you

- Implement client/server, solutions in less than a day installs can be done in minutes without costly, client/server reconfiguration.
 No changes to host FOCUS systems are required.
- Provide users with host data simply and easily – users click on an icon, and host queries are processed and handled automatically.
- Receive styled, professional looking reports without reformatting, instead of fext only answer sets from the host. The software handless reformatting transparently without user involvements

- Avoid the headaches of redundant data and rekeying information, since users now have a way to directly access the data they need, run reports, and import data to spreadsheets and word processors.
- Reduce the applications backlog immediately because users can satisfy their own requests:
- Replace 3270 "green screens" with object-based Windows PCs, reducing training and leveraging existing desktops
- Transform mainframe FOCUS systems with GUI front ends – Personal Server and FOCUS Reporter for Windows make it easier than ever.

FOCUS/Database Server

FOCUS/Database Server is the perfect multiuser, high-performance server for the LAN environment, giving you the economy and productivity of LAN-based FOCUS Windows (plus OS/2 and DOS) solutions. With FOCUS/Database Server, you can:

- Enjoy a faster-than-SQL alternative for reporting applications.
- Provide centralized data access with concurrency controls to avoid record locking.
- Deliver a responsive, highperformance environment to users. Only the records you want are retrieved, thereby reducing server load – the perfect data warehouse! And FOCUS/Database Server outperforms SOL-based servers for reporting.
- Implement LANs regardless of your environment, because FOCUS/Database Server supports a wide range of popular networks and protocols

EDA/SQL - The World's Leading Middleware

EDA/SQL provides a software infrastructure that allows any tool and application to access data on virtually any hardware platform, anywhere in the enterprise.

By supporting data integration among different platforms, EDA/SQL functions as middleware; enabling end users to convert enterprise data from any source into information that can serve as the foundation for making critical business decisions.

EDA/SQL provides multidirectional access to and from more than 50 different databases and file structures on hardware platforms from virtually any manufacturer. With EDA/SQL, any environment can be a client or a server to any other environment.



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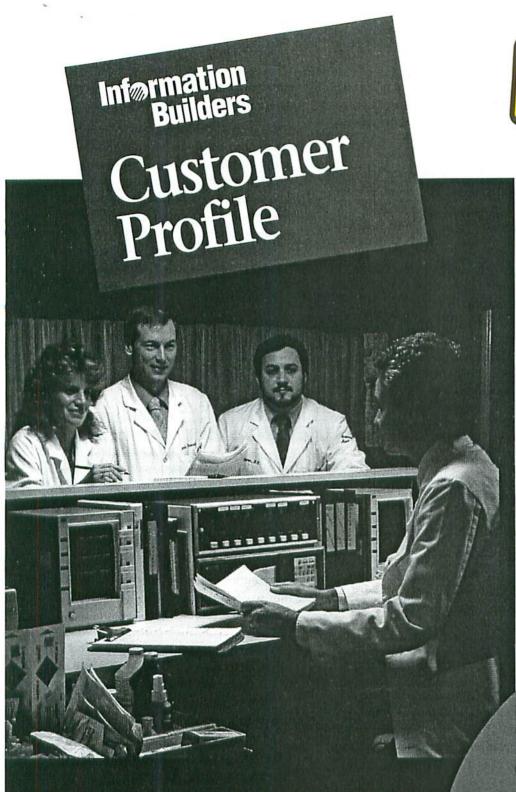
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FOCUS for Windows Monitors The Pulse of Emory Health Care

Atlanta's Emory University Hospital is one of America's foremost teaching hospitals and a national leader in health care practice and research. Together with Crawford Long Hospital and the Emory Clinic, it forms the Emory University System of Health Care (EUSHC), with responsibility for over 3,000 hospital beds in the Atlanta area. EUSHC handles 2 million inpatient and outpatient visits yearly, as well as 500,000 emergency cases. Clearly, the Emory organization is the key health-care resource in the Atlanta area - and its affiliations extend to private community hospitals throughout Georgia.

Snapshot

Organization: Emory University System of Health Care (EUSHC).

Profile: A national leader in clinical care and research.

Headquarters: Atlanta, Georgia.

Objectives: Fast, accurate reporting and decision support; optimize use of hospital facilities; meet government reporting requirements.

Why FOCUS for Windows: Direct interface to Emory's Oracle 7 data warehouse system; retrieves large answer sets; runs and styles existing FOCUS reports.

Results: Better management of hospital facilities and managed-care contracts; faster reporting and decision support; ready for future reporting requirements.

"It's going to be critical to the health-care industry to have easy-to-use reporting systems that can put data into end-user's hands quickly."

Just as important as this record of medical and teaching excellence is Emory's position in the forefront of information systems. EUSHC is taking the lead in designing advanced client/server information systems to meet the needs of today's health-care management, as well as the new challenges of tomorrow's increasingly government-driven health care reform.

A key part of Emory's information management strategy is a powerful, LAN-based data repository for patient management and patient accounting. Designed to store very large amounts of patient and financial information for quick retrieval, Emory's

"data warehouse" is updated daily with literally millions of records' worth of current and historical data from the organization's mainframe computers.

The power of this state-of-the-art "warehouse" is teamed with FOCUS for Windows Standard Edition 1.0. EUSHC is deploying over 250 copies of FOCUS for Windows for easy-to-use data access, graphical reporting, and decision support by Emory's staff. In addition to creating their own reports and queries, end users can run their existing character-based FOCUS reporting applications with Emory's new patient management and patient accounting system, thanks to the portability of FOCUS 4GL code.

Leveraging Hospital Data

Data Administrators Gina Griego and Bill Marcus view Emory's IS systems as vital to the organization's continuing competitiveness and success. "Data warehouses like ours are going to be central to health-care reform," observed Griego. "They're used for both patient-management and patient-accounting by

clinicians, business administrators, marketing staff, and many others.

"Data is critical to health care, of course. But it's also critical in terms of managing in the health-care market," noted Griego. "Doctors and nurses aren't the only people who need fast reporting – increasingly, hospital administrators, facilities planners, managed-care packagers, marketing staff,

> and others need views of current and historical data. So, too, does the government. And information systems are the key to meeting these needs.

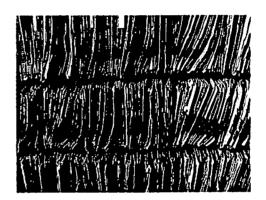
"You've got to have your data systems in place and you've got to be able to report

off of them – and report quickly," Griego added. "The federal government is already introducing a program called HEDIS, which requires standardized reports from healthcare providers," she explained. "In the future, we'll all have to report that way.

"It's going to be critical to the health-care industry to have easy-to-use reporting systems that can put data into end-user's hands quickly," Griego continued. "Data's got to be timely and people must be able to report on it in ways that are meaningful to their jobs, whether they're planning for patients or negotiating managed-care contracts."

Client/Server Technology Improves Data Access

The muscle behind Emory's Patient-Management System and Patient-Accounting System is an Oracle 7 database running on a state-of-the-art, parallel-processor Netframe LAN Server. The Oracle database is automatically updated daily with current data from Emory's mainframes. The poweful Netframe is capable of searching many millions of records and retrieving large answer sets in



minutes. FOCUS for Windows Standard Edition 1.0 is the key that unlocks this mission-critical data and delivers it to users' desktops.

Data for Emory's IS systems is still maintained on the hospital's mainframe, but it is now accessible by hundreds of concurrent users, thanks to FOCUS for Windows and the high-performance data warehouse. Eventually some 150 of Emory's clinicians, hospital administrators, accountants, and marketing personnel will use FOCUS for Windows.

FOCUS for Windows Is "Mission-Critical"

Emory's patient-management and patientaccounting system tracks basic medical records, diagnoses, procedures, room and bed locations, insurance information, patient demographics, and more: "The system is vital for both Emory clinicians and business managers," noted Griego.

Griego described how EUSHC health-care professionals and administrators use FOCUS for Windows to obtain answers to different types of questions from the new IS systems. "Hospital staff needs scheduling tools. They're asking 'How many patients do we expect to have?" Similarly, hospital clinicians and administrators need casemanagement tools. "They're asking questions like 'What quality of care did we give for our cardiac cases?'," said Griego. And both hospital administrators and business managers need business-planning tools to answer questions like "What are our demographics?" and "Should we agree to this particular managed-care contract?"

Timely Data and User-Friendly Reporting Tools

On Emory's mainframes, the FOCUS 4GL language is also a key element of the new Patient-Management and Patient-Accounting system because it serves as the data-extraction tool for the Oracle data warehouse. "One of our biggest challenges was to see that all the patient accounting

data stays in sync on the Oracle side," pointed out Bill Marcus. "If it's not, it's useless... So we use mainframe FOCUS as a data extraction tool for the warehouse."

On end users' PCs, FOCUS for Windows provides capabilities for ad hoc queries and reporting that are essential to health-care planning and management. Marcus explained how the Windows product helped meet the goals of the new system. "The first goal was to take the load off the mainframe. The days of buying new mainframes are over," he observed. "FOCUS for Windows will help with manpower [in the IS department] and save mainframe cycles, too, since our users write applications and reports themselves."

FOCUS for Windows' ad hoc query capabilities met Marcus' second requirement: data access. The built-in Oracle interface performs efficiently when accessing Oracle 7. "Our other goal was just to let users see what data is 'out there'," he explained. "We've had a reporting backlog for so long, this really puts the information in their hands in the most interactive way."

Portable FOCUS Preserved Existing PC Applications

Emory isn't new to desktop FOCUS. The organization first adopted DOS-based PC/FOCUS several years ago and migrated to character-based FOCUS/DLL Windows applications in 1993.

"I've been able to read files developed under the DOS version of FOCUS without a problem," noted Griego. FOCUS for Windows preserved Emory's investment in FOCUS applications while offering users a friendlier point-and-click workstyle. *

Praise for FOCUS Training

Emory contracted with Information Builders' Atlanta Professional Services branch for customized training on the new information system. Some users already had experience with character-based PC/FOCUS for DOS, while others were new to both FOCUS and Windows.

"We've trained about 150 people in the Emory organization," said Griego, "and there are more scheduled." She feels Emory's customdesigned training program has been highly successful – even PC novices are learning both Windows and graphical FOCUS very guickly and retaining what they practice in the classes. As a result, Emory personnel are becoming more productive rapidly.

Ernest Brown, the Professional Services Education Consultant for Information Builders Atlanta explained, "We created special course materials for them, and we're conducting FOCUS for Windows training at their site." According to Brown, Emory is also considering purchasing the customized training materials for their ongoing in-house training program.

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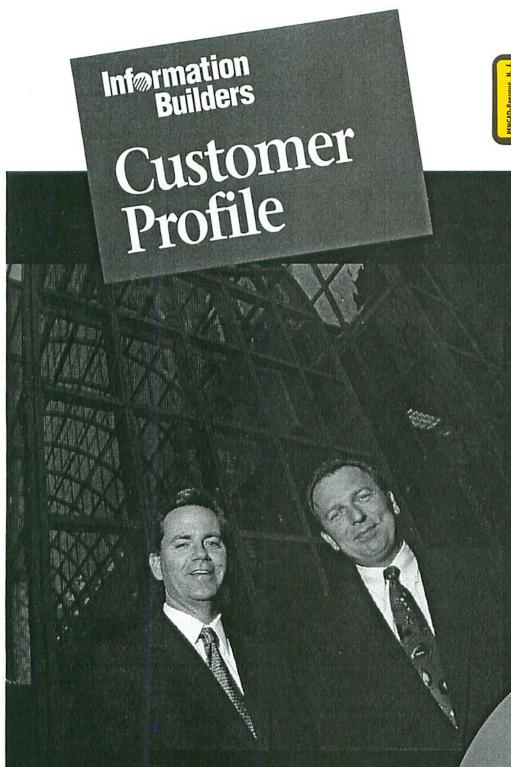
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FOCUS Windows Tools And EDA/SQL Help Fleet Financial Build an EIS

Strategic applications are found in every company, but rarely on the desks of executives. That's because important corporate information is often stored in inflexible systems or arcane formats. There is often no way for nontechnical users to create reports or summarize activities quickly.

That's changing at Fleet Financial Group in Providence, Rhode Island, where business and systems development professionals have partnered to create a client/server-based executive information system. It provides quick and easy access to financial information stored on Digital VAX midrange systems through an intuitive Windows interface on the PC.

Snapshot

Organization: Fleet Financial Group.

Profile: \$48-billion diversified financial services company with 1,200 offices nationwide.

Location: Providence, Rhode Island.

Objective: Create a client/server-based executive information system for quick access to financial information.

Why FOCUS and EDA/SOL: An integrated environment for multi-platform development, high-speed connectivity between the PC and VAX, and board-quality EIS and reporting.

Results: Managers have faster access to data, which has made a remarkable difference in the speed and quality of their analysis.

"We created an analysis screen that looks just like a financial report."

> - David Blezard Lead Programming Analyst, Fleet Financial Group

Fleet Financial Group, founded in 1791, is a \$48-billion diversified financial services company with 1,200 offices and 24,000 employees nationwide.

According to John Bahnken, senior vice president of Functional Financial Management with responsibility for Fleet's business controllers and financial information systems, the business problem Fleet faced was that the corporation was being managed on a line-of-business basis while virtually all of its financial information was focused on legal entities. "We

made a decision to install Hogan's Earning Analysis System (EAS), which provides a powerful profitability measurement engine," Bahnken reports. "Unfortunately, it didn't provide us with the decision support capability we needed."

Says Bob Jones, vice president of Fleet's Financial Systems Development Department in Providence, "We needed to get important financial data into the hands of knowledge workers. But simply downloading data to PCs wasn't acceptable."

"Our organization is performance-driven," explains Bahnken. "We needed to create the capability for executive users to readily identify the profitability drivers for each of our businesses. EAS is a great tool, but it creates vast amounts of data, which we needed to organize in a way that would provide executive information."

"The challenge we faced was to put the Hogan data in a manageable form for executive analysis, drill down, and reporting," adds Jones. A multi-vendor solution would substantially increase systems integration work. Fleet wanted an integrated environment that could tackle each aspect of the problem: multi-platform development, high-speed connectivity

between the PC and the VAX, and boardquality EIS and reporting. Performance was also a significant factor.

After a thorough search, Fleet turned to Information Builders.

EIS Built With FOCUS Windows Tools and EDA/SQL

Developers at Fleet worked closely with the business community and Information Builders to create an executive information system known as the Management Information Capability, or MIC. They used

FOCUS Reporter for Windows for application development on the PC; EDA/SQL for connectivity between the PC and the VAX, and Information Builders' new personal productivity tools – FOCUS Reporter for Windows and

FOCUS/EIS for Windows – to create end user analysis and reporting functions.

Fleet relies on a three-tiered architecture consisting of IBM 3090 mainframes in the data center, midrange VAX 6610s in a cluster where the Hogan financial data is stored, and Windows PCs on the desktop.

"Our architecture is designed to protect the performance of our mainframe production environment," explains David Blezard, lead programming analyst at Fleet, who specializes in financial systems.

Each month, Hogan financial data is transferred from the mainframe to the VAX, extensive calculations are performed, and a "data capsule" is created and stored in an Rdb/VMS relational database. This way, when managers produce reports, they don't have to wait for the computer to calculate totals; they already exist in the answer base.



"It's a database design concept that we call encapsulation," Blezard says. "Data arrives at users' workstations with the totals, yields, and ratios already calculated. This allows managers to drill up or down quickly and ensures data integrity."

The detail records from the three different dimensions total about two million records in 18 million different combinations.

"When you click on the screen for a particular piece of information, you don't have to wait for the system to sort through two million records," Blezard says. "The time-consuming sorting and calculating tasks have already been performed."

This also means that Fleet doesn't have to worry about different analysts arriving at different totals. "It's already been calculated for them," Blezard says. "What's left is the real business at hand – analyzing data, creating reports, and putting it all into a form that management can use."

The Business at Hand

MIC went live in April 1994 and is already a hit with senior management.

Sitting on users' desktops are 486 PCs running the front-end of the MIC applications, created with the FOCUS. Windows tools. User queries are routed over the EDA/SQL gateway via a TCP/IP link to the VAXcluster where the answer set is stored in a large Rdb/VMS database.

FOCUS/EIS for Windows was used to build the screens where user interaction takes place. "We created an analysis screen that looks just like a financial report," Blezard says. "Users can click on fields with recognizable names and drill down into the answer set, rotate the views, and so forth."

Meanwhile, FOCUS Reporter for Windows was used to develop a standard set of reports to traverse the financial hierarchy, allowing for parameter input at each point.

Marie Hixon, manager of Fleet's Financial Information Systems Group, says business users are rapidly taking to the MIC system.

"Most people learn to use it effectively in one day," she reports.

Blezard concurs. "All of the Information Builders Windows products are very intuitive. In five minutes of training, users are on their own with the basic system."

Buoyed by their initial success with the standard MIC capabilities, users are eager to begin creating ad hoc reports with FOCUS Reporter for Windows. Hixon's department plans to conduct training classes to get them started. "The biggest requirement is understanding the construction of the data," she says. "From there, the process of actually creating reports appears to be easy. A programming background isn't required."

Fleet has also been happy with MIC performance, "Response time for complex queries using EDA/SQL is acceptable," Jones says. "It is generally within seven seconds, even for queries involving such an enormous answer set. Up to seven seconds may seem like a long time, until you compare it with what managers faced before this system was put in place," Jones continues. "It used to take them days to sift through huge piles of printed reports to get the same results," he says. "Remember, we're talking about two million records worth of source data. Sometimes it would take teams of financial analysts to answer a single question from the CFO."

Once analysts had the data they were looking for, it took even longer to put it into a presentation-quality format for senior managers to use. Data had to be manually rekeyed into spreadsheet programs, or special report procedures had to be written by the IS staff.

"Having this online research capability gets the desired analysis very quickly," Hixon says. "You don't have to spend time finding the variants. Instead, you can spend your time analyzing them. It has made a remarkable difference in the speed and quality of our analysis."

"Most people learn to use it effectively in one day."

> - Marie Hixon Systems Group Manager, Fleet Financial Group

"We've created a lot of excitement with this product."

Bob Jones
 Vice President ,
 Financial Systems
 Development,
 Fleet Financial Group

Teaming Up: Fleet and Information Builders' Professional Services

Fleet gives high marks to Information Builders' Professional Services team for their assistance throughout the project. "We have had good experience with Information Builders in the past," Jones says. "We value their expertise in application development and connectivity issues. The MIC system meant covering some new ground for us, so we were glad to be able to develop it with Information Builders, as a team."

Under Blezard's supervision, three consultants from Information Builders' Professional Services group and three Fleet staff members - one of whom was a senior business analyst from Bahnken's organization - worked together for several months until the project was completed. The consultants helped with each phase of the process, supplementing Fleet's in-house expertise. Blezard adds, "It was crucial to the success of the project that we had a business user on-site during the design and development phase. We needed to develop a tool that would be intuitive, so the business analyst could concentrate on analyzing the data."

"Our goal was a knowledge transfer, and I am confident we have achieved that,"

Jones says. "Our in-house developers now understand all facets of the technology. We will be able to do this ourselves next time."

Blezard shares Jones' enthusiasm. "When you hire Information Builders' consultants, you get not only the consultants themselves, but also the company behind them," he says. "Whenever there was an issue that was beyond the immediate expertise of the team, we could drive it back through the ranks of Information Builders' technical staff."

Powerful System Delivered to Knowledge Worker

In the future, Fleet plans to upgrade its VAX systems to DEC Alpha AXP servers. Because the OpenVMS operating system offers full functional equivalence between Alpha and VAX versions, Fleet can add OpenVMS Alpha computers to its existing VAXcluster gradually, experimenting with the new technology as they go.

"We've created a lot of excitement with this product," Jones says: "Our developers are tired of writing COBOL report procedures. Seeing the power we have placed in the hands of users is very refreshing to them. Believe me, there is already a big demand for similar systems within Fleet."

He pauses, considering the ramifications of what they have achieved. "As big banks and other large companies start to downsize, what's left is a lot of knowledge workers," he says. "These people require production-strength, high-level analytical capabilities to do their jobs. The business problem is simple: the need for easy-to-use, accessible information, and the ability to share that information with other knowledge workers and senior management. We've solved that problem with the help of Information Builders and its new FOCUS Windows-based tools." *

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Int. Cl.: 9

Prior U.S. Cls.: 21, 23, 26, 36, and 38

United States Patent and Trademark Office

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SN 74-566,411, FILED 8-26-1994.

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Prior U.S. Cl.: 101



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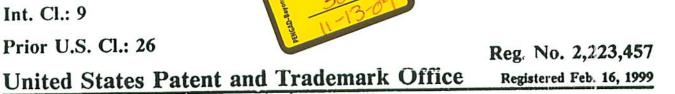
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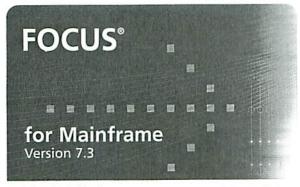
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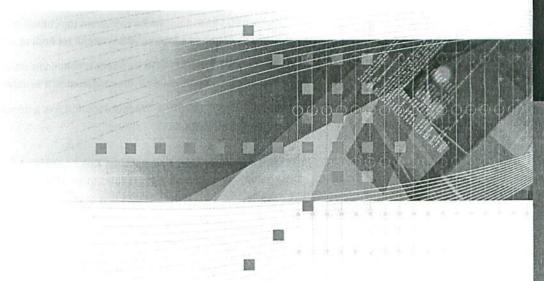
Information Builders is one of the largest independent software companies in the world. We work with over 11,000 customers to ensure their success by putting interactive and actionable information in the hands of everyone in the extended enterprise: employees, partners, suppliers, and customers.

FOCUS



for Mainframe

Version 7.3 Preview



FOCUS – the premier 4GL application development suite – is your best choice for reporting and application development in the mainframe environment.

FOCUS Version 7.3* continues to support your evolving reporting and application development needs by providing a new set of reporting and analysis tools, performance enhancements, layout and design features, and extended limits.

Reporting and Analysis Enhancements

FML hierarchies – Generate a report dynamically based on a hierarchical relationship in the data, such as a chart of accounts or an organizational reporting structure using the Financial Modeling Language. New Master File attributes identify the fields that participate in the hierarchical relationship.

Excel 2000 – Create styled report output in Excel 2000 format with PivotTables and formulas.

SET HOLDMISS – Create HOLD files that distinguish missing values from default values.

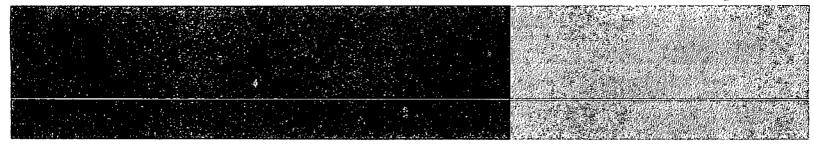
SET HNODATA – Specify how missing values are propagated to HOLD FORMAT ALPHA files.

SET NULL=ON – Determine how missing data is propagated to comma and tab delimited files.

SET FOCFIRSTPAGE and &FOCNEXTPAGE – Control report page numbering and produce sequential page numbering over multiple reports.

TABLASTPAGE – Produce "PAGE x of y" numbering on a PDF, Excel 2000, postscript, or HTML report.

Note: Until version 7.3 is officially released, any feature listed is subject to change or removal.



Summary prefix operators – Use prefix operators with fields specified in SUBTOTAL, SUB-TOTAL, SUMMARIZE, and RECOMPUTE commands at the sort break and grand total levels.

NORMSDST and NORMSINV functions — Find the percentile into which a data value falls with the NORMSDST function, which calculates the cumulative normal distribution function.

NORMSINV returns its inverse and is useful for finding the value at the top of a given percentile.

Multivariate REGRESS – Create a report column in which each row represents a point on a linear regression line based on up to three independent variables.

Extensions to FORECAST – Model data that has a trend or periodicity using double and triple exponentiation methods.

Report Styling and Formatting Enhancements

Cascading StyleSheets - Apply rules to an HTML report while creating concise HTML.

StyleSheet enhancements—Apply sophisticated styling to HMTL, PDF, postscript, and Excel 2000 reports, including decimal alignment of values in multi-line headings and footings. Also, include multiple reports in one PDF file.

Minus edit format option - Print negative numbers with a minus sign on the right side.

NEWDATA - Place a subhead or subfoot on its own page.

Multiple FOLD-LINE – Use multiple FOLD-LINE commands in a request.

Performance Enhancements

Compiled DEFINEs – Compile only those expressions actually used in your request and compile date expressions and calculations on long packed numbers more efficiently.

SET SAVEDMASTERS – Store up to 99 parsed Master Files in memory for repeated use.

SET USERFCHK – Control function parameter verification prior to execution. You determine whether to issue warning messages for fixable errors in parameter lengths or to halt processing.

DYNAM DSIO – Cache FOCUS database pages in memory on VM using Dynamic Data Space I/O. This produces performance gains when running multiple requests against the same data source.

Database Enhancements

DATASET on a segment – Identify the physical file name of a location segment or crossreferenced segment with field redefinitions using the DATASET attribute on the segment level in a Master File.

COMBINE 63 – Include up to 63 databases in a MODIFY COMBINE structure.

FIELDTYPE=R – Identify TIMESTAMP columns in a DB2 data source with the FIELDTYPE=R attribute in the Master File. MODIFY and Maintain will not update these columns; the value will be controlled by DB2.

DB2FETCH FIRST n ROWS support – Retrieve only the number of rows specified in a READLIMIT test, reducing the size of the answer set produced.

Text field enhancements – Read text strings up to 32K for DB2 CLOB and LONG VARCHAR columns described with ACTUAL=YX in a Master File. These columns can be used for read-only operations.

WHERE optimization of variable length character data types – Reference relational data types such as VARCHAR, LONG VARCHAR, and CLOB in WHERE criteria. Optimize CONTAINS and OMITS tests against a relational column described with USAGE=TX and ACTUAL=TX in the Master File as LIKE and NOT LIKE predicates.

AnV format - Identify relational VARCHAR data types with the new AnV format.

Raised Limits

Increased number of ACROSS values – Sort up to 1,056 ACROSS values in a request, increased from 95.

Increased column title space - Use as much space for column titles as your memory allows.

Increased number of external Index partitions – Create an external index with up to 240 partitions.

Long segment and index names - Specify segment and index names up to 64 characters long.

Find Out More

To learn how FOCUS 7.3 can help your company succeed, talk to an Information Builders representative today.

Contact your local Information Builders office, visit us at www.informationbuilders.com, or in the U.S. and Canada, call (800) 969-INFO.

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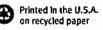
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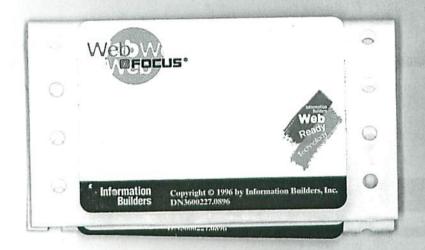
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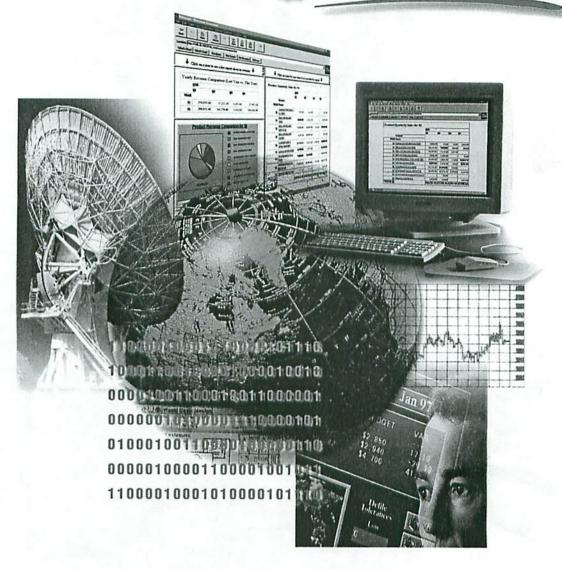




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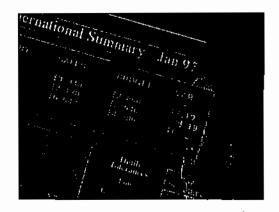
Corporate Web for

Better Reporting and Analysis

With the proliferation of the corporate intranet, information technology can deliver what it has been promising for years...easy access to the information users need... regardless of hardware platforms, database structures, or application programs. Not since the introduction of MS Windows® has there been a technology with such a profound potential impact on the way we create and distribute information. And now Information Builders, the industry leader in enterprise data access and reporting systems, introduces WebFOCUS...the ultimate production reporting and analysis system specially designed to take advantage of the low-cost, low-maintenance, and wide distribution of the corporate intranet.

Imagine a Reporting and Analysis System That:

- Automatically translates business reports into HTML for display in your favorite Web browser
- Provides fully formatted and styled reports



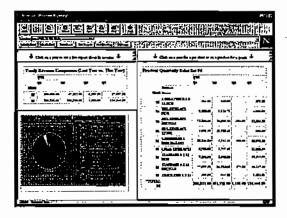
WebFOCUS is more than simply the software industry's most powerful reporting system ported to the Web. It is the birth of a whole new paradigm for the creation and distribution of corporate information.

- Offers advanced EIS features such as value-based color coding and dynamic generation of value-based hotlinks for drill-down
- Offers standard reports, parameterized queries, and ad hoc requests
- Cives users access to any database in the enterprise
- Partitions query and report processing for maximum performance
- Allows you to create and distribute reports during off-peak hours for increased efficiency
- Requires no training for end users
- Eliminates end user deployment and maintenance nightmares
- Requires no application programs or drivers on the desktop

Dynamic Business Information Made Available to the Enterprise

WebFOCUS allows organizations to create an embedded link between existing HTML pages and dynamic data resident in any corporate database. The result is a low-cost, easy maintenance reporting system that is instantly available to any user in the enterprise.

WebFOCUS allows you to launch and display the results of multiple report requests in any combination of fully formatted labular data, charts, graphics, and text.

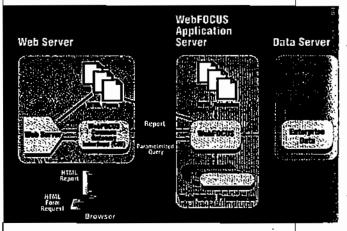


Fully Formatted Report Output on Any Standard Internet Browser

When you launch a report request in WebFOCUS, it is processed by the WebFOCUS engine which can reside on your Web server, database server, or on a separate application server. WebFOCUS automatically transforms your report to HTML format for display on any standard Web browser. Reports can follow any style sheet or template using your choice of colors, fonts, and formatting. The process is completely transparent to the end user and is accomplished with no additional desktop software other than the Web browser. Using the newest generation of browsers, you can display the results of multiple report requests in any combination of tabular data, charts, graphics, and text.

Industrial-Strength Reporting Power

FOCUS is already the standard for production reporting systems at thousands of the world's leading corporations and government agencies. Why? Because the power, efficiency, and reliability of FOCUS have never been equaled by any other software package on any operating platform...including the Internet! Unlike SQL wraparound tools, FOCUS was invented for reporting and analysis. Even the most complex queries with conditional fields, rankings, "IF-THEN-ELSE" logic, multi-dimensional analysis...the kind of reports that can bring an SQL reporting tool to its knees...are just a few point-and-clicks in FOCUS.



One Tool Reads Any Data in the Enterprise

WebFOCUS utilizes Information Builders' award-winning middleware technology to give your Web server access to virtually any database on any computer platform. You can use our relational or nonrelational gateways to select host databases, specify fields, and perform sorts, joins, calculations, and aggregations. You can even add a hub server that will access, join, and aggregate

data from multiple computer platforms throughout your enterprise.

Dynamic Hyperlink Generation Provides Advanced EIS Capabilities

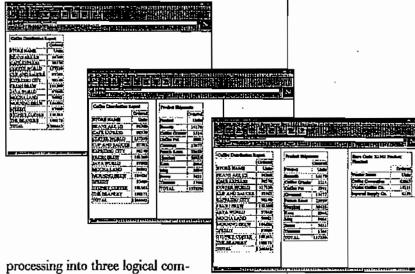
WebFOCUS provides the developer with a powerful yet economical and easy-to-use tool for building and managing hyperlinks. These hyperlinks are the stepping stones that allow users to click on hotspots and drill down within a report for additional or supporting data. Best of all, hyperlinks can be based on conditional values. For example, in a yearly revenue report, clicking on a current year would give you a detailed

ADABAS Informix SQL/D\$ ALLBASE/SQL SQL Server Ingres ALL-IN-1 File Sybase Cabinets MODEL 204 SYSTEM 2000 ASCII MUMP\$ Teradala Btrieve NonStop SQL TOTAL TurbolMAGE CA-Datacom/DB ODBC-Enabled CA-IOMS/OB Databases ULTRIX/SQL C-JSAM Oracle UNIFY dBASE UX Informix 05/2 DB/2 OBMS OS/400 DB/2 VSAM 082 PACE WIIS DB2/2 QSAM W DM\$ Adb ...and more ENSCRIBE RMS IMS/DB ShareBase

breakdown from the current-year database, while clicking on an earlier year would give you a summary report by category from the historical database.

Multi-Tier Architecture Makes Production Reporting on the Web a Reality

WebFOCUS utilizes Information Builders' middleware technology to separate report



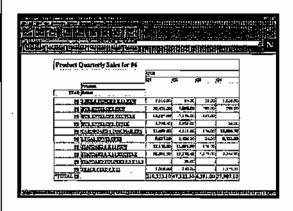
ponents... Data Access, Business Logic, and Presentation Logic. As a result, all queries can be dynamically partitioned. This guarantees that the complex number-crunching and aggregation takes place on your back-end database server...not on your Web server or desktop. Only the finished, formatted report comes down to your Web server...already converted to HTML and ready for display on your desktop browser. The result is a more efficient network and superb performance.

Dynamically Parameterized Queries Save Time and Ensure Accuracy

In addition to providing standard selection parameters, WebFOCUS lets you create dynamic pick lists from any database table. Users don't have to be familiar with precise database values. This saves time and helps users create accurate, valid reports. In addition to parameterizing selection criteria, WebFOCUS can parameterize sorting and grouping criteria. As a result, one WebFOCUS report can provide more detailed information than multiple reports created with other reporting tools.

Advanced EIS features allow you to drill down on summary information for more detailed data. WebFOGUS will also dynamically create hyperlinks based on conditional values. In the above report sequence, when unit volume is above a predefined threshold, a hyperlink is automatically created so the user can display supporting data.

Conditional styling feature provides automatic display of sales above 17,000 in green and below 7,000 in red.



Conditional Styling to Quickly Identify Critical Information

WebFOCUS reports can be conditionally styled based on predetermined thresholds. As an example, numbers over budget can automatically display in distinct colors or font variations. This allows business managers to immediately spot critical information or trends and make more timely business decisions.

Intelligent Report Distribution for True Workgroup Reporting

WebFOCUS offers a unique way to automatically refresh the information on your Web site using our FOCUS Six Report Server. FOCUS Six Report Server lets you schedule report updates according to your own predefined criteria. It also provides conditional report distribution utilizing today's most popular systems. You can define which managers receive specific reports or parts of reports (electronic bursting), when they receive them, and what information individual reports should contain. You can even define thresholds that automatically send a report to a specific manager if, for example, a summary number is over budget. The Report Server less you schedule report processing, report distribution, and Web updates for nights, weekends, and other off-peak hours.

Ad Hoc Reporting Capabilities for Power Users

Information Builders knows that from time to time, more experienced users may want to create their own ad hoc queries and reports. For these users, WebFOCUS provides a simple, yet robust point-and-click tool to build ad hoc requests quickly and efficiently.

Simultaneous Deployment on Client/Server or Web

The reports and queries you build in FOCUS for your corporate Web are identical to those that you would build for your client/server systems. The FOCUS Six for Windows development environment ensures that all report procedures you create can be immediately deployed in both client/server and Web environments. This means you can build industrial-strength reporting applications using one common toolset and deploy these applications on either platform...whenever and wherever appropriate.

Technology Leader in Production Reporting Systems for Corporate Web

For more than a decade, Information Builders has been the industry leader in back-end server technology for enterprise data access and production-level reporting and analysis systems. The corporate intranet is the newest extension of our technology and has allowed us to jump way ahead of any other intranet solutions vendor. Call us today, and we'll show you how easy and cost-effective it can be to surf your corporate Web for better reporting and analysis.

Information Builders

Corporate Headquarters Two Penn Plaza, New York, NY 10121-2898 (212) 736-4433 Fax (212) 967-6406 World Wide Web: www.fbi.com E-mail: info@ibi.com

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- Baltimore, MD Consulting: (703) 247-5565
- Boston, MA (781) 272-8600
- Charlotte, NC Consulting: (704) 334-7440
- Chicago, IL (630) 971-6700
- Cincinnati, OH (513) 891-2338
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- Federal Systems, DC (703) 276-9006
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- Los Angeles, CA (310) 615-0735

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- Portugal Information Builders Iberica S.A. Lisbon 351-1-396-32-25

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Consulting: (212) 736-4433, ext. 4443

Minneapolis, MN (612) 338-5181

- New Jersey (973) 593-0022

St. Louis, MO (314) 434-7500

• San Jose, CA (408) 453-7600

Scottsdale, AZ (602) 368-7575
 Seattle, WA (206) 628-6494

Consulting: (703) 247-5565

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- Brazil SCI, Sao Paulo 55-11-2536303
- Cameroon SIS, Douala Deido 237-222249
- Costa Rica Consultores de Sistemas San Jose 506-2-572080
- Benmark Cybernetics International A/S Copenhagen 45-35-262002
- Egypt Slandardata, Cairo 202-4183374
- Finland InfoBuild Oy Helsinki 358-9-3433400
- Gulf States Bahrain Kuwait Oman
 - Oatar Saudi Arabia Yemen
 - United Arab Emirates
 - Al-Gosaibi Information Systems 973-274090
- Hong Kong Computer Power HK Hong Kong 852-2834-4788
- Hungary Dalaman Ltd. Budapest 361-176-0162
- Indonesia Sumber Daya Informatika Jakarta 62-21-5485004

Italy Sollware Technology
 Milan 39-2-66982255
 Japan K K Ashisuta Osaka 81

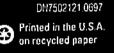
Tet Aviv 972-3-5483555

Israel Advanced Technology Etd.

- Japan K.K. Ashisuto, Osaka 81-6-3737113 Tokyo 81-3-34370651
- Korea Jigu Assist, Seoul 82-2-3472-1177
- Mexico Grupo Scanda 525-422-2700
- Norway Dalus A/S, Sandvika 47-67-55-15-60
- Panama ADR System Integralors Panama City 507-2639333
- Peru J. Evans & Assoc., Lima 511-421-8527
- Singapore Computer Power Group(s) Ptc. Ltd. Singapore 65-5388622
- Slovenia IC Delta
 - Nova Gorica 38-65-23812
- South Africa International Computers SA (Pty) Ltd. Johannesburg 27-11-2335911
- Sweden Cybernetics International AB Stockholm 46-8-7539900
- Taiwan Galaxy Software Services Taipei 886-2-3897722
- Turkey Keysoft Ltd. Istanbul 90-212-227-9508.
- VAR and Reseller Information (800) 969-4636

Toll-Free Numbers

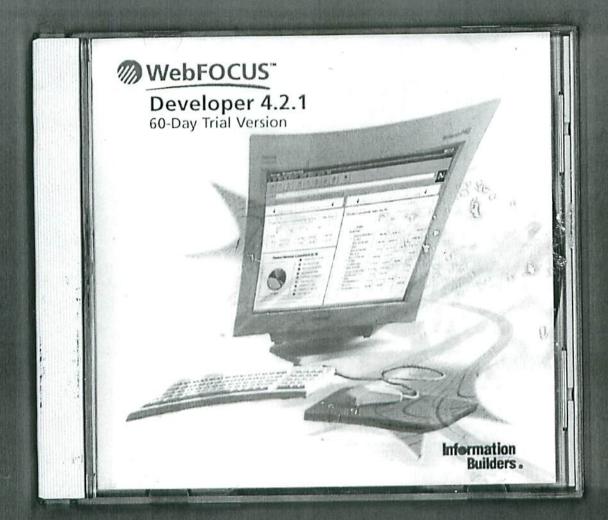
Sales and Information (800) 969-INFO



Information Builders.

www.ibi.com







Developer 4.2.1 60-Day Trial Version

Information Builders.

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World Wide Web: www.informationbuilders.com E-mail: info@ibi.com

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Int. Cl.: 9

Prior U.S. Cls.: 21, 23, 26, 36 and 38

United States Patent and Trademark Office

Reg. No. 2,248,562

Registered June 1, 1999

TRADEMARK PRINCIPAL REGISTER

WEBFOCUS

INFORMATION BUILDERS, INC. (NEW YORK CORPORATION) 1250 BROADWAY NEW YORK, NY 10001

FOR: COMPUTER PROGRAMS FOR DATA BASE MANAGEMENT, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND 38).

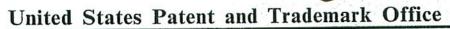
FIRST USE 4-0-1996; IN COMMERCE 4-0-1996.

SER. NO. 75-250,817, FILED 3-3-1997.

J. TINGLEY, EXAMINING ATTORNEY

Int. Cl.: 9

Prior U.S. Cls.: 21, 23, 26, 36 and 38



Reg. No. 2,685,249 Registered Feb. 11, 2003

TRADEMARK PRINCIPAL REGISTER

WEBFOCUS

INFORMATION BUILDERS, INC. (NEW YORK CORPORATION)
2 PENN PLAZA
NEW YORK, NY 101212898

FOR: COMPUTER SOFTWARE FOR DATABASE MANAGEMENT; COMPUTER SOFTWARE FOR ACCESSING DATABASES BY MEANS OF GLOBAL COMPUTER NETWORKS TO GENERATE REPORTS; SOFTWARE DEVELOPMENT TOOLS FOR MAKING REPORTING AND ANALYSIS AVAILABLE THROUGH GLOBAL COMPUTER NETWORK WORLDWIDE WEBSITES AND FOR EXTENDING THE FUNCTIONALITY OF ENTERPRISE REPORTING AND ANALYSIS SYSTEMS ON

TO GLOBAL COMPUTER NETWORKS; AND COMPUTER SOFTWARE FOR ACCESSING AND UPDATING DATABASES THROUGH GLOBAL COMPUTER NETWORKS, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND 38).

FIRST USE 4-0-1996; IN COMMERCE 4-0-1996.

OWNER OF U.S. REG. NO. 2,248,562.

SER. NO. 76-081,024, FILED 6-30-2000.

JAMES A. RAUEN, EXAMINING ATTORNEY

EXHIBIT

July 5, 1999

Computer PLAINTIFF'S

NEW: Enhancements, latest technology

Information Builders Touts w

BY DAVID JASTROW

New York

FOR NEARLY 25 YEARS, Information Builders Inc. focused on selling middleware solutions direct. But with the debut of WebFOCUS V.4, it hopes to move to the front end with some help from Web-focused integrators.

The new version, launched at PC Expo, takes the latest Information Builders' middleware technology and adds enhanced data visualization and a mix of graphics and text that allows businesses to publish more information over the Web, said Gerald Cohen, president and founder of the privately owned company.

"You might say the Internet itself is all about collaboration," Cohen said. "New types of E-business partnerships are being formed. As the public network matures, connecting business processes in new and innovative ways is fast becoming one of the defining tenets of the IT industry."

For example, Sierra Systems Consultants Inc., a Vancouver-based integrator, used Web-FOCUS to help Canadian utilities company Westcoast Energy Inc. develop and deploy a year 2000 inventory and decision support system over a corporate intranet. The utility needed a centralized and secure database in order to analyze and share data about every system that could be impacted by a Y2K failure, said Bob Dyck, Y2K project manager at Westcoast.

Canada is a cold region and people's welfare is at risk if systems crash, Dyck said. "I use [the system] to monitor the company's overall Y2K progress and identify risk areas," he said.

WebFOCUS is the cornerstone of Information Builders' InfoElite channels sales program. The developer now has about 300 VARs and has added new lead-generation programs to help grow that base further, said Marty Meyers, vice president of channel sales and marketing at Information Builders. The vendor also has expanded its training seminar and audio conference schedules and hopes to use industry events like PC Expo to recruit new VARs, he

In addition, the New York-based company, which generated sales of more than \$300 mil-

> lion last year, held a three-day technology conference in Orlando, Fla., last month. Included were sessions on how Information Builders' products work within an E-business environment and how partners can create solutions for clients ranging from data distribution for catalogs to online shopping.

"As the install base of [Windows] NT servers rapidly grows, so does the demand for our WebFOCUS analysis and reporting system. Even within huge companies, every department can have its own applica-



GERALD COHEN: Forming new types of E-business partnerships.

tion, and that is driving business to the middle market," said Meyers.

Transitioning the company culture at Information Builders was difficult, but necessary, he said.

"We simply do not have the bandwidth to efficiently pursue all of these smaller yet highly lucrative opportunities," Meyers said. "Channel partners often understand the highly specialized needs of vertical organizations better than we do. We want to work with them to deliver our enterprise-scale

offerings in a more targeted manner."

In most circumstances, Information Builders will parlay all service opportunities from organizations with less than \$200 million in annual revenue through the channel, Cohen said.

"We are offering a complete set of E-business needs to the channel," he said. "As corporations continue the conversion of their operations to the Web, we want to be the largest business information company in the world."

Information Builders

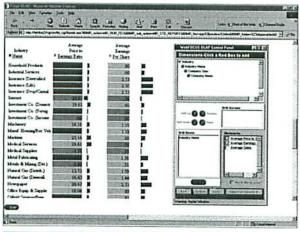
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PRODUCT PRODUCT PEVIEW Annual Issue

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product Information Builders' WebFOCUS



WebFOCUS Creates a Single Reporting Center for NASA's Diverse Data Environment

BACKGROUND: Putting a shuttle into space is one of the most complex processes in the world. Even minor errors or slips in quality control can have a major impact on the schedule and success of a mission. Much of this work can be assigned to experienced contractors, freeing NASA engineers to focus on the most critical areas and enhancements or changes to the shuttle processing preparation. However, assigning tasks to outside contractors cannot happen at the expense of communication or quality control which are essential to a successful mission.

PLATFORMS: WebFOCUS from Information Builders runs on a dual processor Dell 6100 server running Windows NT. It collects data over TCP/IP connections from IBM, Unisys, Sun, Hewlett-Packard, Digital and Amdahl systems from other organizations in NASA and from contractors.

PROBLEM SOLVED: As NASA turned many shuttle processing tasks over to contractors, we required a way to collect and report on large volumes of data to ensure that contractors were meeting standards for completeness, quality and timeliness. A typical launch sequence must track 5,500 flight parts and 4,000 ground support items as they proceed through 150,000 discrete operations and 3,600 work instruction packages, one-third of them unplanned. The contract is performance based, which means that NASA must be able to measure a contractor's work against predefined metrics and standards. INSIGHT is a WebFOCUS-based system, developed by NASA that allows NASA engineers to track the progress of shuttle preparation and to collect baseline data for review and improvement of processes. INSIGHT collects data from approximately 20 different databases, few of them owned by NASA. Because customer support and cooperation was critical, we followed a building-block approach that enabled us to construct the system over a period of time. With this approach, we could work

with customers to design how they would input and store data; and we could add to the system over time without discarding previous work. PRODUCT FUNCTIONALITY: Web-FOCUS produces a rich variety of reports that NASA engineers can use to check everything from near real-time processing data to the progress of an 18-month project. We have no control over the systems and databases that contractors and related organizations use. Nevertheless, WebFOCUS enabled us to publish data from many different databases.

STRENGTHS: Combined with Information Builders' EDA middleware, WebFOCUS is extraordinarily capable for creating a single reporting center in an extremely diverse data environment. It also worked well with our building-block approach, enabling us to bring reports online over a period of time and creating a foundation on which new capabilities could be built. Its graphical reporting power is very important in enabling NASA staff to track performance and progress over time.

WEAKNESSES: Like most database systems, if large numbers of joins are required when accessing live data, processing time will be increased. We would also like more robust statistical analysis capability, although we have yet to find a better solution than the one WebFOCUS currently provides.

SELECTION CRITERIA: We examined a number of alternatives, but WebFOCUS was clearly superior in fitting into our particular requirements. We needed a system capable of collecting data from diverse systems and adaptable to changing requirements as our needs and technology changed. In addition, we needed to generate many different kinds of reports, in both graphical and tabular formats.

DELIVERABLES: WebFOCUS assisted NASA to successfully meet its organizational objective of moving from a system in which NASA engineers controlled the shuttle preparation process to a system in which they track performance and intervene only in exceptional situations. This system preserved contractor relationships by not requiring significant changes to their systems other than those needed to provide good performance measurement. The system has also established a foundation on which NASA will be able to improve its processes.

VENDOR SUPPORT: We found Information Builders to be very

responsive to our needs. At the time we began our project, we discovered some constraints in WebFOCUS, which we discussed with Information Builders. Over the ensuing two years, Information Builders resolved virtually every one of those issues.

provides adequate documentation including training manuals, reference materials and online help. We have also found Information Builders' publications to be very helpful when we push the boundaries of the applications.

Information Builders

reviewed by Ronald Phelps, project manager for the National Aeronautics and Space Administration.

manufacturer Information Builders Inc. Two Penn Plaza New York, NY 10121

contact (212) 736-4433, (212) 967-6406 fax www.informationbuilders.com



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Recommended Curriculum

Information Builders Inc.

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Ongaing Advanced Education Focus Applications Prolessional FOCUS Internate Course 203 FOCUS Internats Course 203 Four Months Extensive FOCUS Experience Six Monihs Extensive FOCUS Experience Section of the sectio Advanced Techniques Course 201 Advanced Tachniques Courte 201 Five Moulty Practical FOCUS Experience Two Months Practical FOCUS Exportence Equivalent (BI Compuler Based Yraining Equivalent 181 Computer Based Traising Basic FOCUS Serios Course 102/104 Basic FOCUS Seden Course 101/103 Getting Started with PC/FOCUS Course 100 One-Hour FOCUS Lesson New PC/FDCUS User DP Professional (PC or Mainframe) End User (PC or Mainframo) Skiji Level Ia be Achieved Occarional User) | |

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This diagram represents IBIs core Skit-Development Curriculum. There are, in addition to this, other specialized courses such as Decision Support Techniques and What's New in FOCUS, as well as Management and Training Seminars. The attached brochure describes all of the Educational Programs provided by Information Builders, Inc.

Coovnahi & 1984, Information Builders, Inc.



Dear FOCUS User.

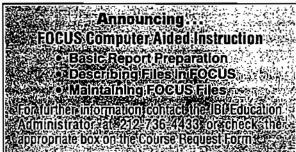
In our continuing effort to enhance FOCUS Education and in response to user requests, we are proud to announce the following improvements and additions.

The Basic Series (File Description, File Maintenance and Basic Report Preparation) has been completely revised. In addition to improved course design and graphics, all three courses will be based on an EMPLOYEE data base instead of the CAR data base.

FOCUS MODIFY Internals, which was introduced in the last half of 1983, met with tremendous success. In 1984, FOCUS Retrieval Internals, which is now a one-day course, and FOCUS MODIFY Internals, which is a two-day course, are being offered as a three-day series at IBI offices. This series may also be taught at client sites as a three-day series or as two separate courses.

The revised Advanced Techniques course includes pertinent FOCUS 4.0 features such as security and REBUILD enhancements, and advanced maintenance commands. It has been reorganized so that programmers can take the course soon after attending the Basic Series.







This mini-course teaches you to prepare simple FOCUS queries in less than an hour. For further information, contact your local sales office.



FOCUS EDUCATION

The primary objective of each course is the acquisition of practical skills that students can use immediately upon return to their own organizations. This is accomplished through the use of workshop sessions during which attendees solve realistic problems. All FOCUS courses are taught by experienced instructors who are professional consultants possessing extensive technical skills and broad knowledge of the varied applications of FOCUS. A variety of training programs is offered to meet users' needs. These include:

- Basic Courses users are trained to prepare reports and describe and maintain files in FOCUS while attaining a facility for working in the timesharing environment. Separate courses are offered for new computer users and for experienced computer users.
- Advanced Courses problem-solving workshops and FOCUS Internals feature practical techniques for implementing complex applications. These courses are useful to system analysts and data base designers. "What's New in FOCUS?" is a presentation of the latest enhancements in FOCUS. FOCUS MODIFY Internals addresses the internal processes of the MODIFY command and its subcommands.
- Special Courses these in-depth courses concentrate on specialized topics such as Financial Modeling Language and Host Language Interface.
- Managers Courses Basic Report Preparation for Managers is offered for experienced and new computer users, introducing them to FOCUS reporting capabilities for managers.

PC/FOCUS

FOCUS Education courses have been developed for both mainframe and PC users.



LIST OF COURSES

BASIC COURSES

FOR EXPERIENCED COMPUTER USERS (PREREQUISITE: ONE YEAR PROGRAMMING EXPERIENCE)

- 101 File Description and Maintenance
- 103 Basic Report Preparation
- 107 Basic Report Preparation for Managers

FOR NEW COMPUTER USERS (NO PREREQUISITES)

- 102 Basic Report Preparation
- 104 File Description and Maintenance
- 108 Basic Report Preparation for Managers

FOR NEW AND EXPERIENCED COMPUTER USERS (PREREQUISITE: BASIC COURSES)

- 105 FOCUS in the TSO Environment*
- 106 FOCUS in the CMS Environment*

ADVANCED COURSES

(PREREQUISITE: BASIC COURSES AND APPROPRIATE EXPERIENCE USING FOCUS)

- 201 Advanced Techniques
- 202 What's New in FOCUS?
- 203 FOCUS Retrieval Internals
- 204 FOCUS MODIFY Internals

SPECIAL COURSES

(PREREQUISITE: BASIC COURSES)

- 301 Decision Support Techniques
- 302 Host Language Interface*
- *All courses (except 105, 106 and 302) are appropriate for both mainframe and PC/FOCUS users.

All FOCUS courses may be scheduled at customer sites. See page 20 for information.



COURSE 101/103

FILE DESCRIPTION AND MAINTENANCE

(for Experienced Computer Users)

PREREQUISITE

One year of programming experience

DURATION: Two Days

DESCRIPTION

This course provides all the basic skills needed to create and maintain FOCUS data bases. On the first day, the description of both simple sequential and FOCUS files is covered. Single-path, multi-path, and shared structures are introduced. On the second day, FOCUS file maintenance facilities and techniques are covered.

Practical skills are acquired through working on realistic examples individually and as a class.

FILE DESCRIPTION TOPICS INCLUDE

- Specifying File, Segment, and Field Attributes
- Segment Parentage and Linkages
- Joining FOCUS Files
- Static Cross-referencing of FOCUS Files

FILE MAINTENANCE TOPICS INCLUDE

- Transaction Description
- Control over Input, Update, and Deletion of Records
- Computations
- Validation of Data
- Logging of Transactions
- START, STOP, CHECK
- FIDEL
- Case Logic





COURSE 101/103

BASIC REPORT PREPARATION

(for Experienced Computer Users)

DURATION: One Day

DESCRIPTION

Course 103 covers the basic elements of report preparation requests. The course material begins with elementary FOCUS concepts, then expands to include all aspects of FOCUS reporting facilities. Practical applications are emphasized through exercises worked out individually and as a class.

TOPICS INCLUDE

- Data Retrieval, Sorting, and Printing
- Record Screening
- Subtotaling and Format Control Operations
- Performing Calculations
- Formatting Reports, Headings, Subheadings, etc.
- Connecting Related Data from Several Files
- Extract Files
- Short Paths

DATES OFFERED

New York City — January 4-6, 9-11, 23-25; February 1-3, 13-15, 27-29; March 12-14, 21-23, 26-28; April 2-4, 11-13, 16-18; May 1-3, 15-17, 29-31; June 4-6, 13-15, 18-20,

Palo Alto - January 9-11; February 6-8; March

12-14; April 9-11; May 7-9; June 11-13.

Los Angeles — January 23-25; February 27-29;

March 28-30; April 25-27; May 23-25; June 27-29.

Washington - January 11-13; February 8-10; March

14-16; April 11-13; May 9-11; June 13-15.

Chicago - January 4-6; February 1-3; March 7-9;

April 4-6; May 2-4; June 6-8.

Dallas - March 21-23; April 16-18; June 20-22.

St. Louis — January 16-18; March 19-21; May 16-18.

Houston - January 30-February 1.

Seattle - March 19-21.

Salt Lake City — April 9-11. Vancouver — April 30-May 2.



BASIC REPORT PREPARATION FOR MANAGERS

(for Experienced Computer Users)

PREREQUISITE

The equivalent of one year of programming experience

DURATION: One Day

DESCRIPTION

Course 107 is designed for managers who have computer experience. This course gives a comprehensive overview of FOCUS reporting capabilities and will give the manager the basic skills needed to produce reports and graphs.

TOPICS INCLUDE

- Data Retrieval, Sorting, Printing and Graphing
- · Calculation, Aggregation, and Other Capabilities
- Record Screening
- FOCUS Graphics
- · Formatting Reports, Headings, Subheadings, etc.

Course 107 is only offered as an On-Site course. See pages 19 and 20 for tuition schedule and additional information.





COURSE 102

BASIC REPORT PREPARATION

(for New Computer Users)

PREREQUISITE

None

DURATION: Two Days

DESCRIPTION

The basic elements of report preparation requests are covered in this course, with special attention given to the needs of the new computer user. Beginning with introductory data processing and FOCUS concepts, the course material expands to include the most generally useful aspects of the reporting facilities of FOCUS. Practical applications, with exercises worked out individually and as a class, are emphasized.

TOPICS INCLUDE

- Introduction to Computer Terminology
- Terminal Usage
- · Data Retrieval, Sorting, and Printing
- Record Screening
- Subtotaling and Format Control Operations
- · Performing Calculations
- Formatting Reports, Headings, Subheadings, etc.

DATES OFFERED

New York City — January 11–12, 16–17; February 15–16; March 5–6, 20–21; April 4–5, 25–26; May 7–8, 21–22; June 6–7, 25–26.

Palo Alto — January 25–26; March 26–27; May 29–30. Los Angeles — March 5–6; June 4–5.

Washington — February 15–16; April 2–3; June 18–19.

Chlcago — February 22-23; April 23-24; June 25-26.

Dallas — February 13-14.

Houston — May 14-15.



FILE DESCRIPTION AND MAINTENANCE

(for New Computer Users)

PREREQUISITE

Course 102

DURATION: One Day

DESCRIPTION

Course 104 provides new computer users with basic skills for describing and maintaining FOCUS data bases. In addition, the student will learn how to describe simple sequential files.

File description is covered in the morning session and file maintenance facilities are covered in the afternoon. Practical skills are acquired by working on realistic examples.

FILE DESCRIPTION TOPICS INCLUDE

- Overview of File Structures
- Specifying File, Segment and Field Attributes
 Joining FOCUS Files

FILE MAINTENANCE TOPICS INCLUDE

- Describing Transactions
- FIDEL
- · Control over Input, Update, and Deletion of Records
- Calculations
- Validation of Data

DATES OFFERED

New York City — January 13, 18; February 17; March 7, 22; April 6, 27; May 9, 23; June 8, 27. Palo Alto - January 27; March 28; May 31. Los Angeles — March 7; June 6. Washington — February 17; April 4; June 20. Chicago — February 24; April 25; June 27. Dallas — February 15. Houston — May 16.



COURSE 108

BASIC REPORT PREPARATION **FOR MANAGERS**

(for New Computer Users)

PREREQUISITE

None

DURATION: One Day

DESCRIPTION

Course 108 is designed for managers who have little or no experience with computers. This course gives a comprehensive overview of FOCUS reporting capabilities and will give the manager the basic skills needed to produce reports and graphs.

TOPICS INCLUDE

- · Introduction to Computers
- Data Retrieval, Sorting, Printing, and Graphing
- Calculation, Aggregation, and other Capabilities
- Record Screening
- Formatting Reports, Headings, Subheadings, etc.
- FOCUS Graphics

Course 108 is only offered as an On-Site course. See pages 19 and 20 for tuition schedule and additional information.



FOCUS IN THE TSO ENVIRONMENT

PREREQUISITE

Courses 101 and 103 or 102 and 104

DURATION: One Day

DESCRIPTION

Course 105 is designed to give FOCUS users the TSO skills needed to use FOCUS in the TSO environment. It will give the student the opportunity to apply the knowledge gained from the Basic Courses in this environment. After a review of the timesharing facilities the user will require for FOCUS, the student will create a FOCUS master description, build a data base, and prepare reports from that file.

TOPICS INCLUDE

- Logon Requirements
- Timesharing File Commands and Conventions
- TSO CLISTs
- FOCUS Utilities
- System Editors

Course 105 is only offered as an On-Site course. See pages 19-20 for tuition schedule and information.



COURSE 106

FOCUS IN THE CMS ENVIRONMENT

PREREQUISITE

Courses 101 and 103 or 102 and 104

DURATION: One Day

DESCRIPTION

Course 106 is designed to give FOCUS users the CMS skills needed to use FOCUS in the CMS environment. It will give the student the opportunity to apply knowledge gained from the Basic Courses within the environment. After reviewing the timesharing facilities required for FOCUS, the attendee will create a FOCUS master description, build a data base and prepare reports from the file.

TOPICS INCLUDE

- System Editors
- Timesharing File Commands and Conventions
- CMS EXECs
- File Size Estimation
- FOCUS Utilities

Course 106 is only offered as an On-Site course. See pages 19-20 for tuition schedule and information.





ADVANCED TECHNIQUES

PREREQUISITE

Courses 101 (104), 103 (102), and (for non-programmers) an in-depth use of FOCUS for a minimum of two months

DURATION: Two Days

DESCRIPTION

Course 201, designed for users with a working knowledge of FOCUS, provides valuable techniques and concepts not readily available in the FOCUS Users Manual. This is accomplished in a problem-solving environment using advanced FOCUS techniques to build a prototype application. The application is developed based on data elements, their relationships, and reports to be produced. Data base management, security facilities, advanced reporting, statistical analysis capabilities, and FIDEL, the full screen data entry/data display facility, are presented. The prototype system is completed with the creation of a user-friendly interactive environment using the Dialogue Manager.

TOPICS INCLUDE

- · Advanced File Design Concepts and Techniques
- Efficiency Considerations
- Recursive Files and Alternate File Views
- Advanced Maintenance Commands
- · Interactive File Browsing
- · File Restructuring Utility
- Formatted Screen Data Entry using FIDEL
- Data Base Security
- Dialogue Manager

DATES OFFERED

New York City — January 5–6, 19–20; February 6–7, 21–22; March 8–9, 19–20; April 9–10, 17–18; May 3–4, 14-15; June 11-12, 28-29.

Palo Alto — January 23-24; March 19-20; May 14-15. Los Angeles — January 30-31; April 2-3; June 11-12.

Washington - January 17-18; March 19-20; May 21-22. Chicago - January 19-20; March 22-23; May 30-31.

Dallas - January 12-13; March 5-6; May 1-2.

St. Louis — February 13-14; April 23-24; June 25-26.

Seattle - March 22-23.

Salt Lake City — April 12–13. Vancouver — May 3–4.



COURSE 202

WHAT'S NEW IN FOCUS?

PREREQUISITE

Courses 101 (104), 103 (102), and 201 or equivalent experience

DURATION: One Day

DESCRIPTION

Course 202 has been designed to bring FOCUS users up-to-date on the latest FOCUS enhancements available in FOCUS 4.0. A knowledge of FOCUS 3.9 facilities is presumed.

TOPICS INCLUDE

- HELP Facility
- Raised Boundaries
- Improvements in the TSO Environment
- **New Session Monitor Commands**
- · Multiple Off-Line Files
- Ranking Command
- Simplified Masking
- Page Control
- Fixed ACROSS and BY Lists
- **DECODE File List**
- JOIN Enhancements
- **Graphic Enhancements**
- Simultaneous Updating
- NEXT Subcommand in MODIFY
- KU Segment LOOKUP in Modify
- Introduction to PC/FOCUS
- User Workbench
- FOCUS CAL
- Data Dictionary
- COBOL FD Translator

DATES OFFERED

New York City - February 9; May 17.





FOCUS RETRIEVAL INTERNALS

PREREQUISITE

Course 201 at least six months previously, or equivalent experience

DURATION: One Day

DESCRIPTION

Course 203 is designed to give experienced FOCUS users insight into the essential internal operations of FOCUS. FOCUS structures are discussed in terms of the relationship of segments, the way in which indexes are used and maintained, and efficiency considerations. The retrieval process is delineated to show what happens and when, sorting versus not sorting and the strategies for physical versus logical file traversals.

This course is useful to system designers in developing complex systems. Instructors are senior consultants with wide experience in designing FOCUS applications.

TOPICS INCLUDE

- · Physical structure of a FOCUS Data Base:
 - Pages Segments Pointers
- Logical Structure
- File Views
- Retrieval Overview
- DBA
- Missing Segments
- Internal Matrix
- Multi-path Retrieval
- Core Utilization and Efficiency Considerations



FOCUS MODIFY INTERNALS

PREREQUISITE

Course 203 and six months maintaining FOCUS data bases

DURATION: Two Days

DESCRIPTION

MODIFY Internals is an intensive two-day course that addresses the internal processing logic of the MODIFY facility. This course is useful for advanced FOCUS users who are responsible for the implementation and support of complex systems. Clients who have already taken FOCUS Retrieval Internals need only attend FOCUS MODIFY Internals.

TOPICS INCLUDE

- Processing Overview
- Definition of a Transaction
- Processing Logic of the Extended Transaction Features (such as Repeating Groups, COMPUTE, Validate, etc.)
- Extensive Details of the Subcommand Processing Logic
- . Segment and Field Activation and Implications
- Search techniques for all SEGTYPEs
- MATCH and NEXT Action Processing
- Special Considerations for CASE LOGIC
- Special Features including Index View, Location Segments, and Rebuild
- Simultaneous Update

DATES OFFERED

New York City — January 17–19, 25–27; February 22–24; March 14–16, 28–30; April 10–12; May 9–11, 23–25; June 20–22.

Palo Alto — February 13–15; April 25–27; June 27–29. Los Angeles — March 19–21; May 1–3.

Washington — February 27-29; April 16-18; June

Chicago - February 8-10; April 10-12; June 19-21.

Dallas — February 6-8; June 4-6.

St. Louis - February 1-3; June 13-15.



DECISION SUPPORT TECHNIQUES

PREREQUISITE

Courses 102 (103), or equivalent experience

DURATION: One Day

DESCRIPTION

Course 301 is designed to give FOCUS users the skills necessary to use FOCUS as a decision support tool. Those attending will gain competence in creating models for financial and marketing projections.

Additional reporting capabilities which provide greater

flexibility for forms design and specialized reporting formats commonly used in financial statements (balance sheets, income and expense reports) are discussed.

TOPICS INCLUDE

- Graphics
- Overview of Financial Modeling
- "What if?" Capabilities
 Statistical Analysis
- Forecasting
- Dialogue Manager
- Tabular Report Preparation

DATES OFFERED

New York City - February 10; May 18. Chicago - April 9.



COURSE 302

HOST LANGUAGE INTERFACE

PREREQUISITE

Courses 101, 103, and working experience in at least one of the following languages: PL1, COBOL, FORTRAN, BAL.

DURATION: One Day

DESCRIPTION

Designed for those who have a working knowledge of FOCUS, this course covers the techniques for accessing FOCUS files from programs coded in COBOL, PL1, FORTRAN and BAL. The student will learn to retrieve records sequentially, in sort sequence, by key or search criteria, and through calls issued in the host program.

File maintenance procedures covered include: updating, adding, and deleting records in FOCUS files.

TOPICS INCLUDE

- Call Structures
- HLI Commands
- HLI File Communications Block
- Activation of HLI Interface
- Host Language

DATES OFFERED

New York City --- February 8; May 16.





FOCUS TRAIN-THE-TRAINER WORKSHOP

PREREQUISITES

Courses 101, 103 or 102, 104 Pre-Class Assignment

DURATION

Three days for 1-4 attendees Four days for 5-8 attendees

DESCRIPTION

This specialized workshop prepares your instructors to use IBI's educational materials to teach FOCUS Basic Report Preparation, Describing Files in FOCUS, and Maintaining FOCUS Files. Proven techniques for classroom presentation of FOCUS are covered and reinforced throughout the workshop, when students actually present portions of each course.

TOPICS INCLUDE

- How to Make Clear Introductions and State Objectives
- How to Analyze Your Audience
- How to Effectively Use Training Techniques
- How to Prepare Course Presentations
- Live Presentations

EDUCATIONAL MATERIALS

The training materials for the introductory courses, which are used in the Train-the-Trainer Workshop, are available for purchase by companies that wish to use their own instructors. Each set of materials consists of a workbook and a problem set book.

Attendance at a Train-the-Trainer Workshop is highly recommended for your In-house instructors.

DATES OFFERED

New York City --- February 27-March 1 Palo Alto --- January 16-19 Washington --- March 26-29 Chicago --- May 15-18 Dallas --- April 24-27 St. Louis --- June 26-29

TUITION AND FEES

FOR COURSES TAUGHT AT IBI

File Description and Maintenance/ Basic Report Preparation (for experienced computer users)\$420	(3 days)
Basic Report Preparation (for new computer users) \$285	(2 days)
File Description and Maintenance (for new computer users) \$135	(1 day)
FOCUS Internals Courses \$615	(3 days)
FOCUS Train-the-Trainer Workshop. \$820	(4 days)
All others \$135	(per day)

FOR COURSES TAUGHT ON SITE

For th	eport Preparation (maximum 20) e first 15 students\$900 (per day) ach student over 15 .\$40 (per student/day)
For th	Retrieval Internals (maximum 20) e first 15 students\$1,350 (one day) ach student over 15 .\$40 (per student/day)
For th	MODIFY Internals (maximum 20) e first 15 students \$2,700 (two days) ach student over 15 . \$40 (per student/day)
	Train-the-Trainer Workshop mum 8) \$900 (per day)
All other	courses (maximum 20)

For each student over 15 . \$40 (per student/day)
Additional expenses for all on-site classes include:
Instructor's expenses

Shipping expenses

For the first 15 students \$900 (per day)

ON-SITE COURSES

FOCUS Courses can be conducted at the customer's premises. In such cases, the customer provides an overhead projector, a blackboard or flipchart, and terminals with userids. The pace and emphasis on subject matter will be adapted to the needs of the client. To insure the effectiveness of our training, enrollment in each class is limited to a maximum of twenty students (fifteen for Internals classes).



COURSES AT IBI

FOCUS courses are conducted at Information Builders, Inc. offices throughout the country. Classes begin at 9:30 and conclude at 4:30 with lunch provided. Registration should be made at least a month in advance. Cancellations must be called in no later than one week before the class is to be held. To register for any FOCUS course at IBI, please contact the appropriate IBI office by telephone, or send in the attached card.

FOCUS training is conducted outside the United States in the IBI London office and by IBI overseas agents. Contact the IBI New York office for further information.

IBI LOCATIONS

To register for an IBI course, return the attached form or call the IBI office offering the course.

IBI: NEW YORK 1250 Broadway, New York, NY 10001 37th Floor (212) 736-4433

IBI: PALO ALTO 181 Lytton Ave., Palo Alto, CA 94301 (415) 324-9014

IBI: LOS ANGELES
101 Continental Blvd., El Segundo, CA 90245
Suite 458 (213) 615-0735

IBI: WASHINGTON 1655 N. Ft. Myer, Arlington, VA 22209 (703) 276-9006

IBI: CHICAGO 1020 31st Street, Downers Grove, IL 60515 Suite 457 (312) 852-6161

IBI: DALLAS 106 Decker Court, Irving, TX 75062 Suite 120 (214) 659-9890

IBI: ST. LOUIS 111 West Port Plaza, St. Louis, MO 63141 Suite 404 (314) 434-7500

IBI: HOUSTON
Park West Tower One
2500 City West Blvd., Houston, TX 77042
Suite 300 (713) 952-0260

NEW YORK CITY

BASIC COURSES FOR EXPERIENCED COMPUTER USERS

TITLE OF COURSE	File Description and Maintenance		Basic Report Preparation
COURSE #	101/103		
January	4–6	9–11	23~25
February	1–3	13-15	27-29
March	12–14	21-23	26-28
April	2–4	11–13	16–18
May	1–3	15–17	29-31
June	4–6	13-15	18–20

NEW YORK CITY

ADVANCED COURSES

TITLE OF COURSE	Advanced Techniques		What's New In FOCUS?	Decision Support Techniques	НLI
COURSE #	201		202	301	302
January	5–6	19-20	_		_
February	6-7	21–22	9	10	8
March	8-9 19-20		_	_	_
April	9-10	17–18	_	_	_
May	3-4	14–15	17	18	16
June	11–12	28-29	-	. —	_

BASIC COURSES FOR NEW COMPUTER USERS

TITLE OF COURSE	Basic Report Preparation		Desc	lle rigtion nd enance
COURSE#	102		10	04
January	11–12	16–17	13	18
February	15–16	_	17	_
March	5–6	20-21	7	22
April	4–5	25-26	6	27
May	7–8	21-22	9	23
June	6-7	2526	8	27

TITLE OF COURSE	FOCUS Retrieval/MODIFY Internals		1TT Workshop
COURSE#	203/204		TTT
January	17–19	25-27	_
February	22-24	_	27–1
March	14–16	28-30	_
April	10-12	1	_
May	9-11	23-25	_
June	20-22	1	_

PALO ALTO

BASIC COURSES FOR EXPERIENCED AND NEW COMPUTER USERS

TITLE OF COURSE	File Description and Meintenance	Basic Report Preparation	Basic Report Preparation	File Description and Maintenance
COURSE #	101/103		102	104
January	9-11		25-26	27
February	6-8		_	-
March	12-14		26-27	28
April	9-11		_	1
May	7–9		29-30	31
June	11–13		_	_

ADVANCED COURSES

TITLE OF COURSE	Advanced Techniques	FOCUS Retrieval/MODIFY Internals	TTT Workshop
COURSE #	201	203/204	TTT
January	23-24	_	16 –1 9
February	1	13–15	
March	19-20	_	
April	_	25-27	_
May	14-15	<u> </u>	_
Јипе	_	27–29	_

LOS ANGELES

BASIC COURSES FOR EXPERIENCED AND NEW COMPUTER USERS

TITLE OF COURSE	File Description and Maintenance	Basic Report Preparation	Basic Report Preparation	File Description and Maintenance
COURSE #	101/	103	102	104
January	23–25		_	1
February	27–29		_	
March	28-30		5–6	7
April	25–27		-	ı
May	23-25		1	
June	27-	-29	4–5	6

TITLE OF COURSE	Advanced Techniques	FOCUS Retrieval/MODIFY Internals
COURSE#	201	203/204
January	30-31	_
February	_	, –
March	_	19–21
April	2–3	_
May	_	1–3
June	11–12	_

WASHINGTON

BASIC COURSES FOR USERS

TITLE OF COURSE	File Description and Maintenance	Basic Report Preparation	Basic Report Preparation	File Description and Maintenence
COURSE #	101/	103	102	104
January	11–13		_	_
February	8–10		15–16	17
March	14–16		_	_
April	11–13		2–3	4
May	9–11		_	
June	13-	·15	18–19	20

ADVANCED COURSES

TITLE OF COURSE	Advenced Techniques	FOCUS Retrieval/MODIFY Internals	TTT Warkshop
COURSE #	201	203/204	TTT
January	17–18	_	_
February		27–29	_
March	19–20	_	26–29
April	_	16–18	
May	21–22	<u>-</u>	_
June	_	26–28	<u>. </u>

CHICAGO

BASIC COURSES FOR EXPERIENCED AND NEW COMPUTER . EXPERIENCED AND NEW COMPUTER **USERS**

TITLE OF COURSE	File Description and Maintenance	Baelc Report Preparation	Basic Report Preparation	File Description and Maintenance
COURSE #	101/	101/103		104
January	4-6		_	_
February	1–3		22-23	24
March	7–9		_	_
April	4–6		23-24	25
May	2–4		_	_
June	6–8		25-26	27

TITLE OF COURSE	Advanced Techniques	FOCUS Retrieval/MODIFY Informats	Decision Support Techniques	TTT Workshop
COURSE#	201	203/204	301	TTT
January	19 – 20	_	_	_
February	-	8-10	_	-
March	22-23	-	_	
April	_	10-12	9	_
May	30-31	-	_	15-18
June	_	19–21	1	

DALLAS

BASIC COURSES FOR EXPERIENCED AND NEW COMPUTER USERS

TITLE OF COURSE	File Description and Maintenance	Basic Report Preparation	Basic Report Preparation	File Description and Maintenance
COURSE #	101/103		102	104
January	_		_	_
February			13-14	15
March	21–23			_
April	16–18		_	
May	_			
June	20-22		_	

ADVANCED COURSES

TITLE OF COURSE	Advanced Techniques	FOCUS Retrieval/MODIFY Internals	TTT
COURSE #	201	203/204	TTT
January	12–13	_	_
February	1	6-8	
March	5-6		
Apri!	_	_	24-27
May	1–2	_	
June		4-6	_

ST. LOUIS

BASIC COURSES

TITLE OF COURSE	File Description and Maintenance	Basic Report Preparation
COURSE #	101/	103
January	16-	18
February	_	•
March	19-	21
April	_	-
Мау	16-	18
June	_	•

TITLE OF COURSE	Advanced Techniques	FOCUS Retrieval/MODIFY Internals	TTT Warkshop
COURSE#	201	203/204	TTT
January	_	_	_
February	13-14	1-3	_
March	_	_	-
April	23-24		
May	_	_	-
June	25-26	13–15	26–29

HOUSTON

BASIC COURSES FOR EXPERIENCED AND NEW COMPUTER USERS

TITLE OF COURSE	File Description and Maintenance	Basic Report Preparation	Basic Report Preparation	File Description and Maintenance
COURȘE#	101/	101/103		104
January	30–1			_
February	_		-	_
March	_		_	1
April	_		1	1
May	_		14–15	16
June	_		_	1

HARTFORD

Courses are being scheduled for Hartford, Connecticut. Please call the IBI Education Administrator in New York for details.

SPECIAL SITES*

BASIC AND ADVANCED COURSES

SITE	TITLE OF Description Basic and Report Maintenance Preparation		Advanced Techniques
	COURSE #	101/103	201
Seattle	March	19–21	22-23
Salt Lake	April	9–11	12-13
Vancouver	April/May	4/30-5/2	5/3-4

^{*}To get further information or to register for any of these classes contact the Palo Alto branch office of Information Builders, Inc.

COURSE REQUEST FORM

		Today's Date
		Courses:
		Dates:
•		No. of Attendees:
		Course Tuition Total \$:
		Please check location desired and hand- address postcard to IBI location of your choice on reverse side.
		☐ IBI: NEW YORK 1250 Broadway, New York, NY 10001
		☐ IBI: PALO ALTO 181 Lytton Ave., Palo Alto, CA 94301
		☐ IBI: LOS ANGELES 101 Continental Blvd., El Segundo, CA 90245
		☐ IBI: WASHINGTON 1655 N. Ft. Myer, Arlington, VA 22209
		☐ 1BI: CHICAGO 1020 31st St., Downers Grove, IL 60515
		☐ IBI: DALLAS 106 Decker Court, Irving, TX 75062
		☐ IBI: ST. LOUIS 111 West Port Plaza, St. Louis, MO 63141
		☐ IBI: HOUSTON Park West Tower One 2500 City West Blvd., Houston, TX 77042
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